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ABSTRACT

Designed to guide preschool reform efforts and stimulate widespread interest and involvement, this publication calls for statewide, systemic reform to provide a continuum of community-based, family-centered, prevention-oriented services to children and their families. The publication begins by identifying the factors that enhance school readiness. Benchmarks are suggested for states to use as measures of their progress toward the national education goal that "all children in America will start school ready to learn" by the year 2000. These benchmarks include the percentage of: (1) children between the ages of 0 and 5 participating in public and private preschool and child care programs; (2) children participating in accredited programs or programs meeting comparable state standards; (3) eligible children enrolled in Head Start and public preschool programs; (4) communities with family support and education services; (5) low-birthweight babies; (6) pregnant women receiving first trimester prenatal care; (7) women under 20 giving birth; and (8) children fully immunized by age 2. A sampling of initiatives that have been implemented to respond to one or more of the objectives related to the school readiness goal are included. Various studies that have proved the economic advantages of investing in children are reviewed. Particular programs are described in terms of their benefits for children, cost benefits, scope, and participation figures. A 49-item bibliography is included. (AC)

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Every Child Ready For School

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Report of the Action Team on School Readiness

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Redefining the Possible ACHIEVING THE NATIONAL EDUCATION GOALS

National Governors' Association

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Every Child Ready For School

Report of the Action Team on School Readiness

Redefining the Possible ACHIEVING THE NATIONAL EDUCATION GOALS

National Governors' Association

The National Education Goals

Goal 1
By the Year 2000, All Children in America Will Start School Ready to Learn.

Goal 2
By the Year 2000, the High School Graduation Rate Will Increase to at Least 90 Percent.

Goal 3
By the Year 2000, American Students Will Leave Grades Four, Eight, and Twelve Having Demonstrated Competency Over Challenging Subject Matter Including English, Mathematics, Science, History, and Geography, and Every School in America Will Ensure That All Students Learn to Use Their Minds Well, So They May Be Prepared for Responsible Citizenship, Further Learning, and Productive Employment in Our Modern Economy.

Goal 4
By the Year 2000, U.S. Students Will Be First in the World in Mathematics and Science Achievement.

Goal 5
By the Year 2000, Every American Adult Will Be Literate and Will Possess the Knowledge and Skills Necessary to Compete in a Global Economy and Exercise the Rights and Responsibilities of Citizenship.

Goal 6
By the Year 2000, Every School in America Will Be Free of Drugs and Violence and Will Offer a Disciplined Environment Conducive to Learning.

Foreword

If politics is the art of the possible, leadership is truly the art of redefining the possible. As Governors, we are committed to achieving the national education goals. In answer to fears that our aspirations are impossibly high, we insist that the possible must be redefined by restructuring our schools to meet world-class standards.

Following the President's historic education summit with the nation's Governors, six challenging education goals were adopted. The goals provide a grand vision of a revitalized nation ready to seize the opportunities of a new century and millenium. To meet the high standards articulated in the goals, we must reach beyond our current strategies for educating America.

This year, Governors have taken bold steps to implement changes intended to boost school readiness, student achievement, graduation rates, safety in the schools, and lifelong learning. Three action teams of Governors and corporate leaders were established last August to redefine and demonstrate new possibilities in three areas—school readiness, the school years, and lifelong learning. Participating Governors took action at home to implement statewide systemic reforms that would move their states toward achievement of the national education goals.

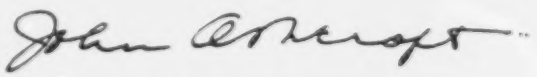
As managers of complex organizations, business executives were asked for their counsel on applying lessons of corporate restructuring to education reform. State and corporate leaders share concerns about quality, productivity, outcomes, and continuous improvement.

As reforms are instituted at home, we are identifying common barriers and key opportunities for systemic change. We still are struggling to change the structures that reinforce the status quo and stifle innovation. But a new education system is emerging. With high-performance goals as our beacon, we see a system that engages all students and their families and communities in a demanding but encouraging environment in which success is attained by all.

The action teams had outstanding leadership. The Action Team on School Readiness was chaired by Ohio Governor George V. Voinovich, with New Mexico Governor Bruce King as vice chairman. Wyoming Governor Michael Sullivan led the Action Team on the School Years, with Arizona Governor Fife Symington as vice chairman. Wisconsin Governor Tommy G. Thompson served as chairman of the Action Team on Lifelong Learning, aided by Indiana Governor Evan Bayh as vice chairman.

The work of each action team was enriched by the participation of prominent business leaders. The Action Team on School Readiness included John E. Pepper of Procter & Gamble and James J. Renier Jr. of Honeywell, Inc. Procter & Gamble's Robert Wehling also provided valuable counsel.

I am grateful to the members of the Action Team on School Readiness for demonstrating the leadership necessary to redefine the possible and for the work of all of those who supported their efforts. *Every Child Ready for School* provides benchmarks for tracking progress on school readiness initiatives and demonstrates that investment in children, particularly during their earliest years, is an investment in their long-term success and in our future.



Governor John Ashcroft, Missouri
Chairman, National Governors' Association

The Challenge

GOAL 1

Readiness for School

By the year 2000, all children in America will start school ready to learn.

Objectives:

- All disadvantaged and disabled children will have access to high-quality and developmentally appropriate preschool programs that help prepare children for school.
- Every parent in America will be a child's first teacher and devote time each day helping his or her preschool child learn; parents will have access to the training and support they need.
- Children will receive the nutrition and health care needed to arrive at school with healthy minds and bodies, and the number of low-birthweight babies will be significantly reduced through enhanced prenatal health systems.

We stand at an educational watershed—possibly the most significant in our nation's history. Our children are in trouble. Recent studies indicate that one of every five children is poor, one of every seven children is receiving welfare, and one of every four children is being raised by a single parent. Every year, one of every eight students leaves school. These statistics must change.

From our country's perspective, it is clear that our children are our most valuable resource; their education is key to our nation's vitality and long-term growth. Yet far too many children are not prepared to start school. For this reason, the Governors and the President established as the first of their six national education goals: "By the year 2000, all children in America will start school ready to learn."

This publication is a product of the NGA Action Team on School Readiness. It is based on the premise that education and school readiness are the best investments we can make in the future of America. They are everyone's business.

Every Child Ready for School is designed to guide reform efforts and to stimulate the interest and involvement of Governors and other policymakers, educators, parents, and social service providers. It is intended to promote the awareness and support of business leaders and citizens from all sectors of society. We must work together. It is critically important.

We have already made some progress. Earlier experiences have taught us that we know enough about what works to act. We know that many factors contribute to children's readiness for school. We know that healthy beginnings start with early prenatal care, good nutrition, and regular check-ups. We know that children need parents who care about them, who talk and read to them, and who play with them. We know that children need safe homes and safe communities. We know that Head Start and other quality early childhood education programs make a difference in children's later success. We know that grassroots, community-based initiatives that involve

coordination of the efforts of a broad range of service providers can maximize dollars and make the best use of staff. We know that strong support from the general public and the business sector can have a significant effect on state and local efforts to improve school readiness.

But despite some progress, the major challenges lie ahead. The Action Team on School Readiness urges statewide systemic reform to provide a continuum of community-based, family-centered, prevention-oriented services to children and their families. It is our hope that this publication will inform and assist Governors and other leaders as they design strategies to develop such services.

This publication begins by identifying the factors that enhance school readiness. Benchmarks are suggested for states to use as measures of their progress toward the readiness goal. A sampling of initiatives that have been implemented to respond to one or more of the objectives for the first of the national education goals are included. Various studies that have proven the economic advantages of investing in children are reviewed.

Bringing about lasting reform is not about politics. It is about the public good. It is about the quality of life. It is about economic growth. It is about investing now to avoid later costs. It is about saving America. It will take a sustained commitment by leaders today, tomorrow, and in the foreseeable future. We can begin by:

- Accepting the premise that all children can learn and that environments are needed that nurture, support, and sustain them from the prenatal period to birth to kindergarten and throughout school.

- Developing a common vision of school readiness across education, health, and social service systems.

- Promoting collaborative efforts to translate that vision into reality. As an old African proverb says, "It takes an entire village to raise a child."

- Ensuring that these efforts maximize both limited resources and opportunities for families to have access to services.

- Implementing outcome-based accountability systems throughout our child-serving systems to ensure results.

As Governors we are committed to breaking the debilitating cycle of poverty, welfare, drugs, unemployment, and crime that ensnares our young people and depletes our resources. If we truly love our children we must do everything possible to develop their natural talents so that they can have productive lives, take care of themselves, and make a contribution to society. The future of our country is in our hands.

George V. Voinovich

George V. Voinovich, Chairman
Governor of Ohio

Bruce King

Bruce King, Vice Chairman
Governor of New Mexico

Other members of the NGA Action Team on School Readiness:

Pete Wilson, Governor of California
Roy Romer, Governor of Colorado
Michael N. Castle, Governor of Delaware
Jim Edgar, Governor of Illinois
William Donald Schaefer, Governor of Maryland
Arne H. Carlson, Governor of Minnesota
John Ashcroft, Governor of Missouri
George A. Sinner, Governor of North Dakota
Booth Gardner, Governor of Washington
John E. Pepper, President of Procter & Gamble
James J. Renier Jr., Chairman and CEO of Honeywell, Inc.

Benchmarks for School Readiness

"There is no better investment we can make than to help ensure that all children come to school physically, mentally, socially, and emotionally ready to learn regardless of where they live in this country or their socioeconomic circumstances."

John E. Pepper, President of Procter & Gamble

Important to ensuring children's readiness for school are:

- Maternal supports such as early and continuous prenatal care, including treatment for substance abuse when needed, appropriate nutrition, and smoke- and lead-free environments;
- A normal birth at normal birthweight (i.e., above 5.5 pounds);
- Quality health care, including routine and developmental screenings with appropriate follow-up, good nutrition, testing for lead poisoning, and immunizations;
- Safe housing in safe communities;
- Positive, stable relationships with parents and other primary caretakers who express love and caring; who talk and read to their children on a regular basis; and who engage in hands-on learning experiences through play, visits to the library, and other activities;
- Quality, developmentally appropriate early childhood educational experiences through either in-home or out-of-home settings; and
- Ongoing services and environmental supports to maintain children's positive attitudes and behavior and to foster continued learning.

Introduction

During the past decade, this country has witnessed a growing movement toward a new kind of accountability for government services and programs—one that measures not dollars spent but results. Adoption of the national education goals in February 1990 accelerated the movement. Suddenly, the debate about educational excellence shifted from expenditures to outcomes. Each goal and its accompanying objectives were carefully drafted to ensure that progress could be measured.

To ensure accountability and provide a mechanism for reporting on national progress toward the goals, the National Education Goals Panel was created in July 1990. The bipartisan panel includes eight Governors, two members of the administration, and four members of Congress. The panel held national and regional meetings on the goals and what information to use to measure progress toward them. Special resource groups of experts and technical subgroups were formed to recommend both short- and long-term indicators of progress toward each goal, to propose ways to develop better assessment processes, to define and measure school readiness, and to establish world-class standards for student achievement in five subject areas.

In 1991 the panel found that there currently are no direct ways to measure the nation's progress toward achieving the readiness goal. The *1991 National Education Goals Report: Building a Nation of Learners* does, however, report indirect measures in the areas of child health and nutrition, family activities with children, and preschool programs.

This guide complements the work of the panel by offering interim benchmarks. The benchmarks define the outcomes or services that directly contribute to readiness and establish a standard (either a baseline or a goal) against which progress can be measured. The benchmarks clearly signal what is important and provide a tool that Governors can use to plan, implement, and monitor state efforts designed to move toward achievement of the readiness goal. Pending the panel's development of direct measures

of children's school readiness, *Every Child Ready for School* provides an interim tool to help Governors assess whether they have the types of programs and services in place that are needed to support and foster children's ability to take advantage of all educational opportunities.

Recommended by a task force of national experts, the benchmarks set forth in this guide will help Governors determine whether they are moving in the appropriate direction toward achieving school readiness. They are designed to measure where states are against where they ought to be.

The benchmarks are based on several overarching principles. First, every child should be physically, socially, emotionally, and cognitively ready for school. Second, schools must be ready for all children. Teachers should acknowledge that each child is an individual and learns differently. Schools must be more responsive to the wide range of backgrounds, experiences, languages, and needs of the children they serve. Third, programs and services should be examined in terms of quality, availability, accessibility, and actual use. Finally, where appropriate, each benchmark should be disaggregated by race, ethnicity, income, family status, and gender in order to provide a clearer, more accurate picture of the status of children's readiness for school.

Research indicates that poverty and economic instability are two of the most powerful predictors of children's later success. Among all children, poor children experience the most health problems but have the least access to health care and live in the most unsafe and unhealthy environments. They are at the highest risk of educational failure but often attend the worst schools. Their families often experience the most stress but have the weakest support systems.

The consequences of children growing up in poverty include:

- School failure—the dropout rate is twice as high for poor children;[1]
- Juvenile delinquency—youth living in underclass areas have higher rates of delinquency than do those living in middle-class areas;[2]
- Malnutrition and ill health—among poor children, child mortality is two to five times greater, growth retardation and anemia are higher, and lead poisoning is three to four times more likely to occur;[3]
- Teen pregnancy—pregnancy is five to seven times more likely if the female lacks job skills and is poor;[4] and
- Child abuse—physical abuse of children is reported four times as often in families with incomes below $15,000.[5]

Despite these odds, many poor children do grow up to become self-sufficient, productive adults. Given the known impact of poverty on children's well-being, however, states may wish to establish a benchmark for the percentage of children between birth and age five who are living in areas with high concentrations of poverty (i.e., those living in neighborhoods where more than 50 percent of the families have incomes at or below the federal poverty level).

The following section provides specific benchmarks for each of the three objectives under the readiness goal. Each benchmark is followed by resources from which data or further information regarding the specific topic may be obtained. It should be noted that in many instances, state-by-state data is not available from the identified resource. However, these organizations should be helpful in locating potential state sources of data or information. The section also includes examples from members of the Action Team on School Readiness of state initiatives that support children's readiness for school.

Objective 1

All disadvantaged and disabled children will have access to high-quality and developmentally appropriate preschool programs that help prepare children for school.

Benchmarks

- **Percentage of all children between the ages of zero and five participating in public and private preschool and public and private child care programs.**
  Potential Resource: Mathematica Policy Research, Inc., Ellen Kisker, (609) 275-2379.
- **Percentage of children participating in programs that are accredited by the National Association for the Education of Young Children (NAEYC) or the National Association of Family Day Care (NAFDC), or that meet comparable state standards, and/or participating in programs where the majority of staff possess Child Development Associate credentials.**
  Potential Resource: Mathematica Policy Research, Inc., Ellen Kisker, (609) 275-2379.
- **Percentage of eligible children enrolled in Head Start and public preschool programs.**
  Potential Resources: Department of Health and Human Services, Head Start Bureau, Doug Klafehn, (202) 205-8572, or National Center for Education Statistics, Jerry West, (202) 219-1574.
- **Percentage of eligible children who are participating in free or subsidized child care programs.**
  Potential Resource: Mathematica Policy Research, Inc., Ellen Kisker, (609) 275-2379.
- **Percentage of eligible children between the ages of zero and five with special needs who are being served under P.L. 99-457, the Individuals with Disabilities Education Act (IDEA).**
  Potential Resource: National Center for Health Statistics, Public Information, (301) 436-8500.

Ohio has increased state funding for Head Start so that 50 percent of all eligible children will be served by fiscal 1993. The state also has approved legislation mandating comprehensive services and family needs assessment in all public preschool programs. Contact: Chris Stoneburner, (614) 644-0791.

To improve quality and access to child care and early childhood development programs, **New Mexico** has increased state subsidies, enhanced training for providers, and reduced administrative costs by consolidating training functions from three organizations into one agency. Contact: Caroline Gaston, (505) 827-3000.

NOTE: The benchmarks under objectives one and two recognize and reflect the significant role parents play in their children's early development and later school success, and the importance of the community environment. However, the recommended benchmarks under objective one are based on out-of-home experiences or care by someone other than the parent or caretaker. This is because, in addition to parental teaching, research suggests that most children can benefit from quality child care and early childhood education experiences in out-of-home settings.

Objective 2

Every parent in America will be a child's first teacher and devote time each day helping his or her preschool child learn; parents will have access to the training and support they need.

Benchmarks

- **Percentage of communities with family support and education services such as Parents as Teachers, family resource centers, or the Home Instruction Program for Preschool Youngsters.**
  Potential Resource: State Departments of Education or Departments of Human Resources.
- **Percentage of school-age parents (below age twenty) who are receiving comprehensive services (i.e., child care, parenting education, counseling, health services, and social services).**
  Potential Resource: State Departments of Education or Departments of Human Resources.
- **Percentage of children between the ages of zero and five who experience consecutive or multiple out-of-home placements such as placements in foster care.**
  Potential Resource: State Departments of Social Services.

Birthday cards and parenting information have been issued to more than 250,000 parents of newborns in **Colorado.** The state also has issued planning grants to help at-risk communties develop family centers. Each center will be planned around community needs with emphasis on preschool participation, before- and after-school care, keeping families together, parenting, well-child checkups, and basic health services. Contact: Donna Chitwood, (303) 866-2888.

Project SUCCESS (School/Community Networks for Successful Families) in **Illinois** is sponsoring pilot programs throughout the state to provide basic health care, nutrition services, mental health services, child protective services, and social activities for children and their families. Lessons learned from the pilot sites will be used to facilitate statewide replication. Contact: Mary Ann Louderback, (217) 782-2654.

Maryland has begun the implementation of systemic reform of children and family services under the auspices of the Governor's Subcabinet for Children, Youth, and Families. The reform effort includes decategorization of state funds and financial incentives for eight local jurisdictions in order to prevent out-of-home placements, return children from out-of-state placements to less restrictive in-state placements, and reunite children currently in substitute care with parents or relatives. Contact: Martha J. Fields, (410) 333-2489.

Based on the assumption that parents are their children's first and most important teachers, **Minnesota's** Early Childhood Family Education program was the first in the nation to provide a combination of learning activities and parenting education for children ages zero to five. Contact: Kathee McCright, (202) 624-5308.

Efforts are underway in **Missouri** to expand the Parents as Teachers program statewide and to conduct an extensive outreach campaign to enroll welfare recipients. The state also has established a team to design and implement new, more appropriate teaching techniques and curricula for kindergarten students. Contact: Karen Gallagher, (314) 751-3222.

NOTE: All parents, regardless of income, race, ethnicity, or marital status, need support and help in raising their children at one time or another. Research indicates, however, that young parents and those who are single are at special risk of being unable to cope with the demands of infants and young children. This is especially true when family and community supports are weak or nonexistent. Thus, the benchmarks for objective two focus on strengthening and enhancing programs and services to guide parents in helping their children learn.

Objective 3

Children will receive the nutrition and health care needed to arrive at school with healthy minds and bodies, and the number of low-birthweight babies will be significantly reduced through enhanced prenatal health systems.

Benchmarks

- **Percentage of low-birthweight (less than 5.5 pounds) and very low-birthweight (less than 3.3 pounds) babies.**
  Potential Resource: National Center for Health Statistics, Mary Grace Kovar, (301) 436-7105, or Scientific and Technical Information Board, (301) 436-8500.
- **Percentage of pregnant women receiving prenatal care during the first trimester.**
  Potential Resource: National Center for Health Statistics, Mary Grace Kovar, (301) 436-7105, or Scientific and Technical Information Board, (301) 436-8500.
- **Percentage of women below age twenty who give birth.**
  Potential Resource: Child Trends, Inc., Kristin Moore, (202) 223-6288.
- **Percentage of children who are fully immunized by age two (those who have received vaccinations for measles, rubella, polio, diphtheria, tetanus, mumps, and pertussis).**
  Potential Resource: Centers for Disease Control, William Atkinson, M.D., (404) 639-1870.
- **Percentage of all children below age five covered by Medicaid's Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) program or private health insurance.**
  Potential Resource: Department of Health and Human Services, Health Care Financing Administration, Richard Chambers, (202) 690-6257.
- **Percentage of eligible participants in the Special Supplemental Food Program for Women, Infants, and Children (WIC).**
  Potential Resource: Department of Agriculture, Food and Nutrition Service, Patty Cunningham, (703) 305-2746.

The third benchmark under objective two again emphasizes the important role parents and other caretakers play in preparing children for school. Stable foster homes and other types of out-of-home placements can provide the nurturing young children need to grow and learn. Research indicates, however, that frequent placements in different settings make it less likely that children will receive the necessary support they need to start school on equal footing with their peers.

California's new Access for Infants and Mothers (AIM) program will provide increased access to maternity, delivery, and infant care services for low-income women who are uninsured. The state is also funding health and support services at school sites under its new HEALTHY START program, and plans are underway to create a new state-supported health insurance program for low-income preschoolers up to age six. Contact: Maureen DiMarco, (916) 323-0611.

Low-income pregnant women in **Delaware** have a choice of receiving on-site services through the local public health clinic or receiving services in their own home. The home visiting program helps identify problems and risk factors that may not be apparent in a public setting and has proven effective in reducing premature births. Contact: Kathryn Way, (202) 624-7724.

North Dakota has implemented an interagency, statewide Early Childhood Tracking System to find, monitor, and make appropriate referrals for children ages zero to five who are at risk of developmental delays. The system focuses on improving access to services, educating parents about their children's needs and available resources, identifying gaps in services, and conducting team case management. Contact: Janis Cheney, (701) 224-2200.

Washington's First Steps program has proven effective in enhancing healthy outcomes for newborns through expanded eligibility for Medicaid, maternity support services during pregnancy and postpartum, case management for women at high risk,

increased reimbursements for maternity care providers, and strong outreach. The state also has implemented a state-financed Basic Health Plan to provide prenatal, postnatal, and well-child care for children ages zero to eighteen in families with incomes up to 200 percent of the poverty level. Contact: Feather Reid, (206) 753-1949.

NOTE: The benchmarks for objective three were selected to cover a continuum of time—from the prenatal period to school entry. While specific benchmarks have been suggested, states may wish to add other measures of school readiness. For example, an additional benchmark for children's health might be the percentage of infants who are born healthy and free of risk. This information should be available from state health departments through an examination of birth certificates and identification of various risk factors (e.g., a single mother below age twenty who failed to complete high school, who received little or no prenatal care, who suffers from substance abuse, who smokes, and/or whose income is at or below the federal poverty level). States also may want to add the percentage of children who arrive at school with no preventable or untreated health conditions as still another measure of children's health.

States also are free to encourage communities to determine their own priorities for addressing children's health care needs. For example, large urban areas may wish to focus on lead abatement in public housing projects in addition to childhood immunizations. Finally, states can take a different approach by establishing categories of benchmarks such as indicators of neonatal vulnerability; health conditions that are fully preventable; health conditions that are not preventable but are correctable if identified and treated appropriately; and health conditions that are neither preventable nor fully correctable but are amenable to treatment if diagnosed appropriately.

Summary

The preceding benchmarks are offered as suggestions for measuring state progress toward ensuring that all children, especially those at risk of school failure, begin school healthy, happy, loved, confident, and excited about learning. The range and variety of the benchmarks indicate that preparing children for school involves a number of factors and a number of stakeholders who must work together to achieve a common vision. The benchmarks offer Governors an important source of help as they advocate the types of programs and services that are needed to achieve the readiness goal.

Good Economics, Sound Policy

"Prevention is just a lot cheaper than cure."
James J. Renier Jr., Chairman and CEO, Honeywell, Inc.

Introduction
The benchmarks are designed to help states measure their progress toward the school readiness goal. They suggest that states should support comprehensive programs and services that focus on prevention and are family-oriented. Research indicates that these programs will enhance children's readiness for school.

The natural question is how these programs will be paid for. There are two answers. First, states and communities can maximize resources through coordination. Public officials at all levels have acknowledged the serious flaws in the service delivery system and have joined forces to meet the needs of their consumers more effectively. Various mechanisms have been adopted by states and localities to address service fragmentation, including creation of cabinet-level agencies for children and families, establishment of interagency commissions and task forces for children, enhanced cross-training of staff both within agencies and across agency boundaries, pooled funding to support local initiatives, and strong leadership of Governors and other policymakers. The goals of the majority of these efforts are to increase efficiency, enhance availability, and improve access.

Second, during this period of diminishing fiscal resources and surging demand for public services, investment in children is good economics and sound social policy. In a March 30, 1992, letter to the President, members of Congress, and the Federal Reserve chairman, 100 economists acknowledged that the nation's long-run economic problems will not be solved in a year or two and suggested that policymakers focus on "increasing public investment in all forms, including education, which has suffered severely just at a time when improved and expanded education is widely recognized as an essential key to the future productivity and competitiveness of Americans."

It is estimated that each dollar spent today on at-risk children to prevent educational failure will produce long-term savings to society.[6]

Conversely, the implications of failing to act are costly. According to the Committee for Economic Development,[7]

- Every class of dropouts earns about $237 billion less during their lifetimes than an equivalent class of high school graduates. As a result, government receives about $70 billion less in tax revenues.

- Each year, taxpayers spend $16.6 billion to support the children of teenage parents.

- About 82 percent of all Americans in prison are high school dropouts. The average annual cost to maintain each prisoner is $20,000. In comparison, a year of high-quality preschool costs about $4,800 and has been shown to decrease the teen arrest rate by 40 percent.

Numerous independent studies have proven that dollars spent on prenatal care, family support activities, and quality preschool programs are a preventive investment that saves lives and money.

Investing for the Long Term
An educated, healthy population is vital to the economic stability of our nation. In 1960, five workers paid for the pension of one retiree. By the year 2020, the number of workers supporting each retiree is projected to fall to 2.2.[8] Thus, to maintain our current standard of living, every member of the workforce must be skilled and productive.

Figure 1 shows the estimated economic impact (potential new tax revenue versus additional spending required) of an improved high school graduation rate that could result from providing additional quality preschool programs for each child eligible for Head Start. Of the 825,000 four-year-olds who were eligible for Head Start in 1990, 433,114 did not participate. Based on the results of the Perry Preschool study, the Early Training study, and the Rome Head Start study, the graph illustrates that if all of these children had participated in a quality two-year preschool program, their high school graduation rate could be expected to increase from 46 percent to 65 percent.

Benefits of other early prevention programs that have demonstrated a positive impact on the readiness of children for school are shown on pages 14 and 15. The program savings vary among the studies presented here due to differences in study techniques, target groups, and methodology. Nevertheless, the message is compelling: Investment in effective prevention programs produces long-term benefits and savings. It is demonstrated by the following data, organized by each of the three readiness goal objectives.

Objective 1

All disadvantaged and disabled children will have access to high-quality and developmentally appropriate preschool programs that help prepare children for school.

Early education programs can be viewed as a combination of preventive, compensatory, and preparatory efforts. High-quality programs are those that have low child-staff ratios, trained and certified staff, strong parental involvement, and developmentally appropriate curricula, and facilitate access to health care and social services. Preschool programs demonstrating the greatest improvements in children's later school performance were those that were intensive, occurred over a long period, and were intergenerational. A 1990 study of 4,500 students found that the longer the preschool experience, the greater the chances of the children being fully prepared for school.[9]

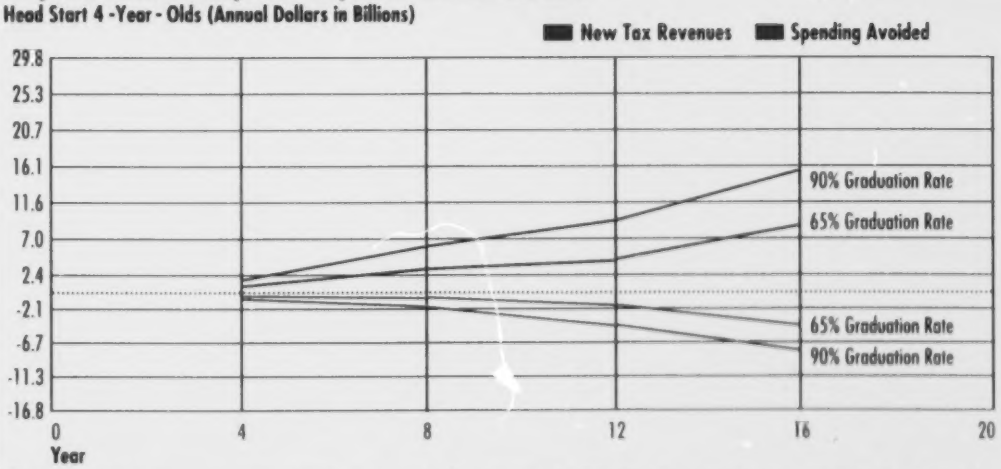
Quality early childhood education programs have been proven to:

- Improve intellectual performance;

Figure 1:

Projected Economic Impact of Improved Graduation Rate

Head Start 4 -Year - Olds (Annual Dollars in Billions)



Notes: All of the dollars are expressed with an annual inflation rate of 4.8%. The two upper curves estimate the potential additional tax revenues resulting from the increased graduation rate to 65 percent and to 90 percent when the population remains stable. The two lower companion curves estimate the new spending that could be avoided because these new high school graduates would be less likely to commit crimes or require long-term public assistance.

Source: IBM Customer Business Development, Boulder, Colorado, 1992.

Highlights of Program Effects

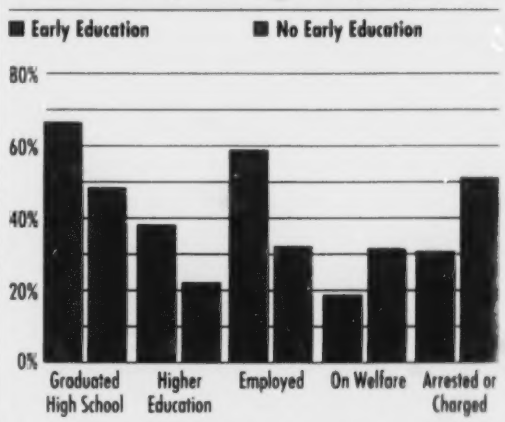
	Benefits for Children
Special Supplemental Food Program for Women, Infants, and Children (WIC)	Reduction in infant mortality and births of low-birthweight infants; reduced prevalence of anemia; improved cognitive skills
Prenatal Care	Reduction in prematurity, low-birthweight births, and infant mortality; elimination or reduction of diseases and disorders during pregnancy
Medicaid	Decreased neonatal and infant mortality; fewer abnormalities among children receiving EPSDT services
Childhood Immunization	Dramatic declines in incidence of rubella, mumps, measles, polio, diphtheria, tetanus, and pertussis
Preschool Education	Increased school success, employability, and self-esteem; reduced dependence on public assistance
Lead Screening and Reduction	Early detection of elevated blood lead levels with treatment and abatement, reducing exposure to and effects of lead poisoning, including poor birth outcomes and impaired cognitive functioning
Smoking Cessation Programs for Pregnant Women	Quit rates ranging from 6 percent to 32 percent with reduced prenatal, neonatal, and postnatal problems, including infant mortality, low-birthweight births, risk of Sudden Infant Death Syndrome, and other complications

Cost Benefit	Scope/Participation
$1 investment in prenatal component of WIC has saved as much as $3 in short-term hospital costs, as much as $3.13 in Medicaid costs for newborns and mothers, and as much as $3.90 for newborns only	4.5 million participants – 50 to 60 percent of those eligible – received WIC services in March 1990, up by 1.4 million since spring 1983.
$1 investment can save $3.38 in cost or care for low-birthweight infants	24 percent of live births in 1988 were to mothers who did not begin prenatal care in the first trimester of pregnancy. The rate for white births was 21 percent; for black births, 39 percent. Figures reflect essentially no change since 1982.
$1 spent on comprehensive prenatal care added to services for Medicaid recipients has saved $2 in infant's first year; lower health care costs for children receiving EPSDT services	In fiscal 1989, an estimated 10.6 million dependent children under twenty-one were served by Medicaid, including 2.5 million screened under EPSDT. Figures reflect an increase of approximately 600,000 served under Medicaid and 400,000 served under EPSDT since 1986.
$1 spent on Childhood Immunization Program saves $10 in later medical costs	No data is available on the percentage of children immunized since 1985. In 1985, the percentage of children ages one to four immunized ranged from 73.8 percent for rubella to 87.0 percent for diphtheria-tetanus-pertussis (DTP). For those ages five to fourteen, the percentage immunized ranged from 85.3 percent for rubella and 93.0 percent for DTP. An increasing incidence of certain diseases has been reported.
$1 investment in quality preschool education returns $3 because of lower costs of special education, public assistance, and crime	In October 1989, there were 11.1 million children ages three to five. Of them, 6.03 million were enrolled in public and non-public pre-primary programs. Another 450,970 children – fewer than one of every five eligible – were participating in Head Start in fiscal 1989. Head Start participation dropped by 1,000 since 1985.
Savings from reduction of effects of lead on U.S. children estimated at $500 million annually	An estimated 3 million to 4 million preschool children have blood lead levels associated with adverse effects, and 400,000 infants are born with toxic blood levels every year.
Smoking cessation for some 350,000 pregnant smokers estimated at $1.75 million, compared with more than $37 million in costs of low-birthweight births	An estimated 21 to 32 percent of U.S. pregnant women smoke during their pregnancies.

Source: U.S. Congress, House of Representatives, Select Committee on Children, Youth, and Families, *Opportunities for Success: Cost-Effective Programs for Children – Update 1990*, 101st Congress, 2nd session, October 1990, pp. 9-10.

Figure 2:

Benefits of Early Education Through Age 19



Source: Adapted from John R. Berrueta-Clement, Lawrence J. Schweinhart, W. Steven Barnett, Ann S. Epstein, and David P. Weikart, *Changed Lives: The Effects of the Perry Preschool Program on Youths Through Age 19*, Monographs of the High/Scope Educational Research Foundation, no. 8 (Ypsilanti, Mich.: High/Scope Press, 1984), p. 2.

- Reduce the need for placement in special education programs;
- Lower the high school dropout rate; and
- Positively affect students' behavior and attitudes toward school.

The long-term, ongoing Perry Preschool study has shown that children who participated in two years of high-quality preschool subsequently had fewer grade retentions, fewer absences, fewer teen pregnancies, fewer arrests, higher rates of enrollment in postsecondary schooling, and higher earnings than did children in a control group. As Figure 3 shows, cost-benefit analysis of the program illustrates that the initial investment of about $9,000 per child resulted in substantially reduced costs to taxpayers.[10]

Objective 2

Every parent in America will be a child's first teacher and devote time each day helping his or her preschool child learn; parents will have access to the training and support they need.

Parents are the first and most powerful teachers of their children. While the formal research on parental education and support programs is limited, objective analysis and observations indicate their potential effectiveness. Other studies confirm the positive effects of early interventions.

- Outcome studies of twenty early intervention programs targeted at some aspect of family functioning with both middle- and low-income populations conclude that more sustained effects are likely to be realized when programs include eleven or more contacts over at least a three-month period. Program interventions in these studies focused on contacts during pregnancy and the first three months of the baby's life.[11]
- A 1991 independent study of Missouri's Parents as Teachers—a primary prevention program that provides home visits, group meetings, and child health screenings to parents with children under age three—found that participation in the program "lessened or resolved poor parental coping skills and family stress for more than half of the families served. More than half of the children observed with developmental delays in the study sample overcame them by age three."[12]
- In the Infant Health and Development Program, 1,000 babies were studied at eight sites for three years to record the results of interventions such as home-based parent training, child development, and parenting classes. As a result of these interventions, children generally had higher IQ scores at age three and demonstrated fewer behavioral problems. Those at greater risk due to social factors benefited most from the services.[13]

- A program for first-time mothers in Elmira, New York, found that for the highest risk young mothers, home visits by nurses reduced the likelihood of abuse and neglect and improved parent-child relationships and child development.[14]

- Studies of the Home Instruction Program for Preschool Youngsters (HIPPY) have documented the program's positive impact on children's later school performance, and increased interest by parents in their children's and their own education and advancement.[15]

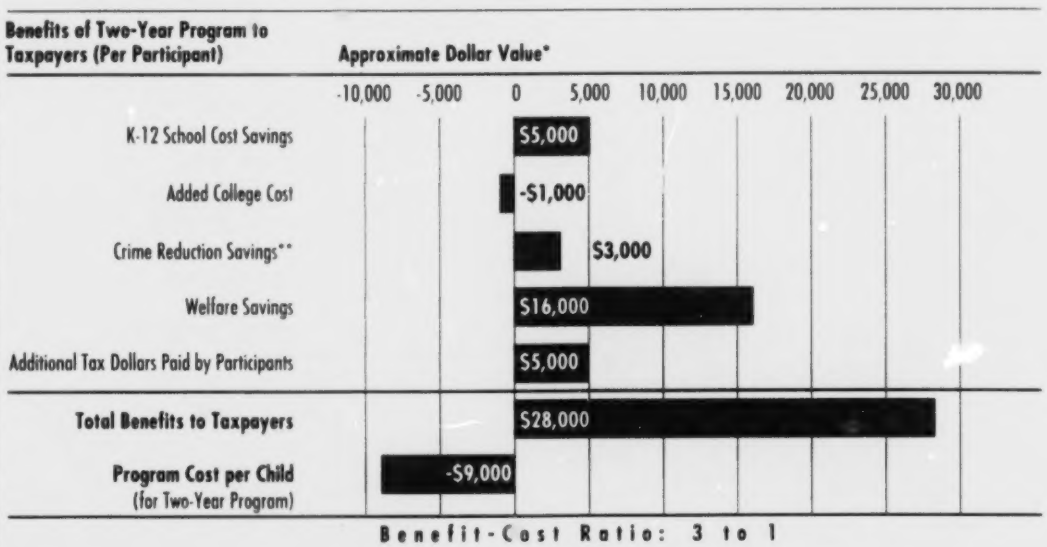
Objective 3

Children will receive the nutrition and health care needed to arrive at school with healthy minds and bodies, and the number of low-birthweight babies will be significantly reduced through enhanced prenatal health systems.

Health and education are inextricably linked in enabling children to be ready to learn and to lead productive lives. Healthy children have more energy and greater capacity to respond to teaching and school activities. Cost-effective health services can be implemented even before children are born by

Figure 3:

Cost Benefit Analysis of the Perry Preschool Program



Notes: * Dollar values are in constant 1981 dollars, discounted at 3 percent annually.
** Crime reduction savings are savings to citizens as taxpayers and as potential crime victims.

Source: Adapted from John R. Berrueta-Clement, Lawrence J. Schweinhart, W. Steven Barnett, Ann S. Epstein, and David P. Weikart, *Changed Lives: The Effects of the Perry Preschool Program on Youths through Age 19*. Monographs of the High/Scope Educational Research Foundation, no. 8 (Ypsilanti, Mich.: High/Scope Press, 1984), p. 91.

providing prenatal care and support to expectant mothers. Women who do not receive prenatal care are three times more likely to deliver low-birthweight babies than are women who receive these services.[16] Some 250,000 babies are born—7 percent of all live births—each year at low birthweight. These infants are at greater risk of school failure than those born at normal weight, as shown in Figure 5. Very low-birthweight infants are at high risk for visual and auditory impairment and learning disorders and are more likely to be inattentive, hyperactive, depressed, socially withdrawn, or aggressive. Many of these babies have borderline IQ scores and intellectual disabilities requiring special education.

Other risk factors that contribute to learning disabilities are maternal smoking, prenatal exposure to alcohol or drugs, lead poisoning, child abuse and neglect, and malnutrition. To ensure that children are healthy and ready for school, a continuum of services—from prenatal support to well-child screenings—must be available to those who need assistance.

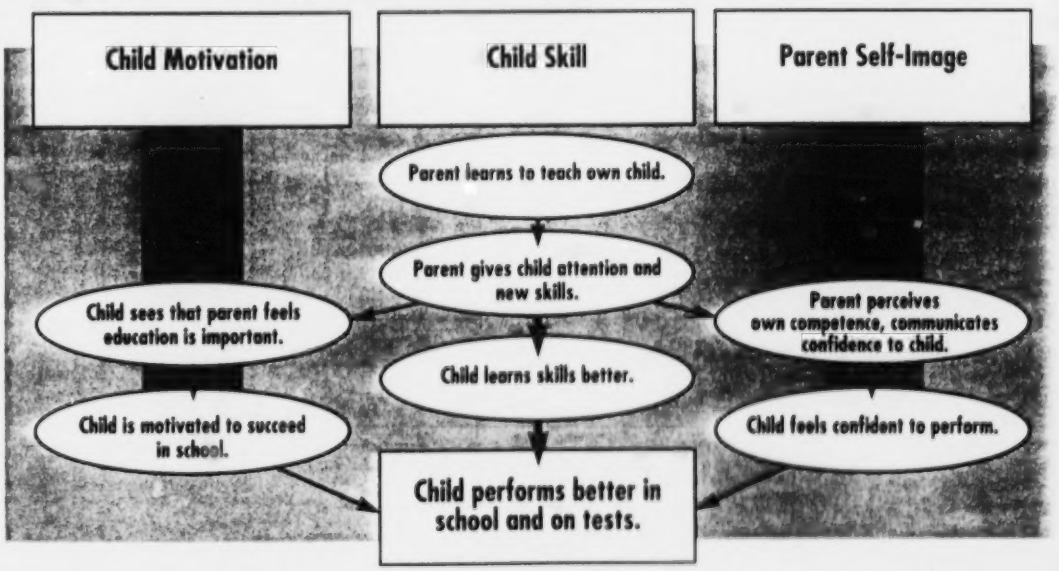
Prenatal Care, WIC, and Medicaid. The following data illustrate the effectiveness of and the need for programs and services that support mothers and their young children. Differences in statistics reflect the use of numerous studies with varied target populations and methodologies.

- Savings from averting one low-birthweight birth are estimated to be $14,799.[17]

- Prenatal services can cost as little as $400 to $600 per client, whereas intensive care for low-birthweight babies or premature infants can easily cost $1,000 per day. Costs associated with the

Figure 4:

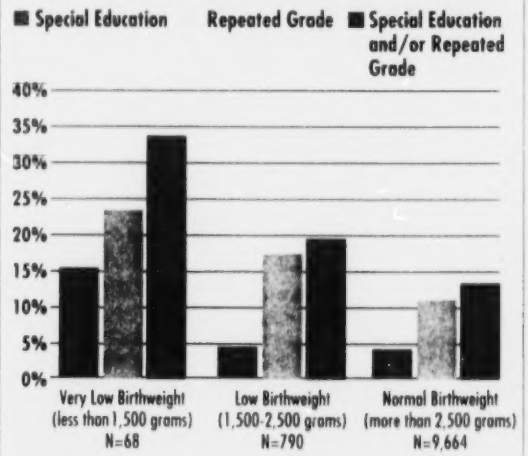
Benefits of Parent Involvement on Student Achievement


Child Motivation
Child Skill
Parent Self-Image
Parent learns to teach own child.
Parent gives child attention and new skills.
Child sees that parent feels education is important.
Parent perceives own competence, communicates confidence to child.
Child learns skills better.
Child is motivated to succeed in school.
Child feels confident to perform.
Child performs better in school and on tests.

Source: Anne Henderson, *The Evidence Continues to Grow: Parent Involvement Improves Student Achievement* (Columbia, Md.: National Committee for Citizens in Education, 1987), p. 5.

Figure 5:

Relation of Birthweight to Various Measures of School Failure Among Children Ages 4 to 17



Source: Lucile Newman and Stephen L. Buka, *Every Child a Learner: Reducing Risks of Learning Impairment During Pregnancy and Infancy* (Denver, Colo.: Education Commission of the States, 1990), p. 7.

initial hospital stay, rehospitalization in the first year, and long-term health care of a low-birthweight infant is estimated to be $14,000 to $30,000.[18]

- As Figure 6 shows, each federal dollar invested in WIC prenatal benefits returns about $3.50 over eighteen years in inflation-adjusted present value, and about $2.89 within the infants' first year to federal, state, and local governments and to private payers. The second figure reflects high initial medical costs in the first year.

- Prenatal WIC benefits to low-income pregnant women reduced the rate of low-birthweight births by 25 percent, and very low-birthweight births by 44 percent.[19] As reflected in Figure 7, the General Accounting Office estimates total savings of more than $1 billion over eighteen years from providing prenatal WIC services to infants born in 1990.

Screenings and Immunizations. Well-child care also has been documented to be cost-effective. For example:

- Medical costs for children participating in Medicaid's Early and Periodic Screening, Diagnostic, and Treatment program were nearly 13 percent lower than those for nonparticipating, Medicaid-eligible children. When costs of administering the program were taken into account, the difference was 7 percent.[20]

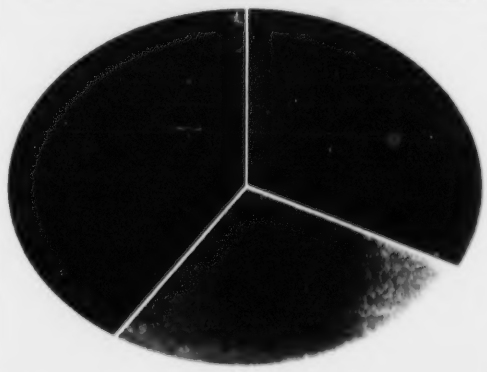
Figure 6:

Estimated Savings from Providing Prenatal WIC Services to Infants Born in 1990

$337 million
Federal monies in reduced payments for Medicaid, Supplemental Security Income, and special education

$277 million
State monies in reduced payments for Medicaid and special education

$423 million
Reduced health care costs by private payers, hospitals, and localities

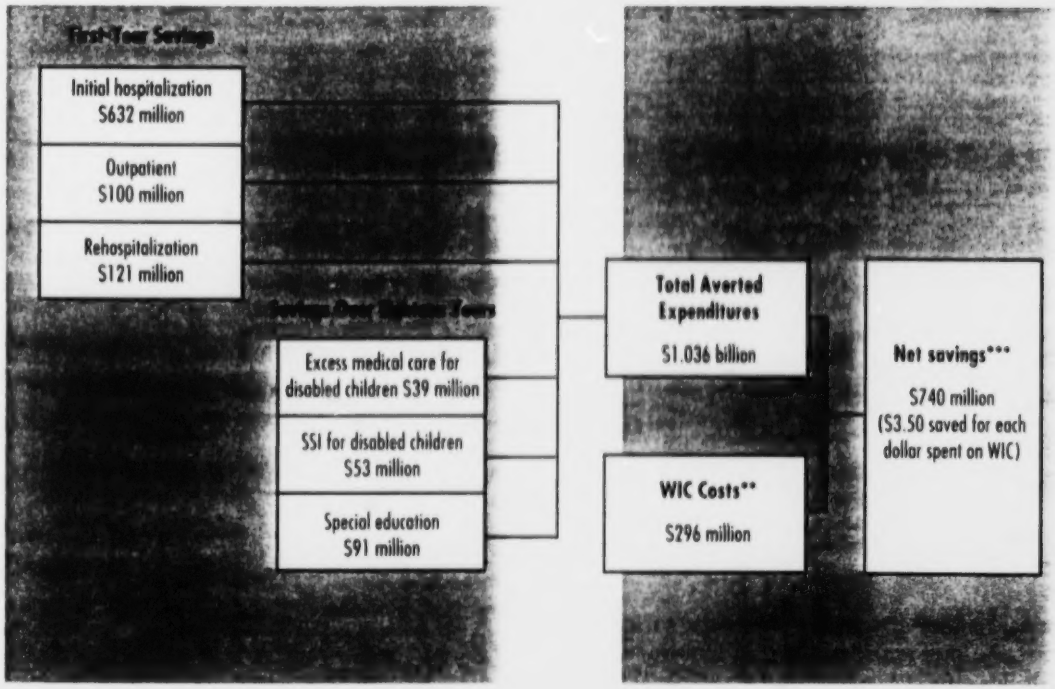


Note: Figures are estimates of savings accrued over eighteen years.

Source: U.S. General Accounting Office, *Early Intervention: Federal Investments Like WIC Can Produce Savings*, April 1992 (Washington, D.C.: U.S. Government Printing Office, 1992).

Figure 7:

Estimated Cost Savings Attributable to WIC Prenatal Benefits*


First-Year Savings
Initial hospitalization $632 million
Outpatient $100 million
Rehospitalization $121 million
Excess medical care for disabled children $39 million
SSI for disabled children $53 million
Special education $91 million
Total Averted Expenditures $1.036 billion
WIC Costs** $296 million
Net savings*** $740 million ($3.50 saved for each dollar spent on WIC)

Notes: * Estimates are based on 36,517 averted low-birthweight births in one year.
** WIC costs are based on federal WIC program costs related to serving pregnant women in 1989-90.
*** Net savings equal the total averted expenditures less WIC program costs.

Source: U.S. General Accounting Office, *Early Intervention: Federal Investments Like WIC Can Produce Savings*, April 1992 (Washington, D.C.: U.S. Government Printing Office, 1992).

- A 1979 study of fifth-grade students found that students with early exposure to lead had lower IQs, a greater need for special services, and more grade retentions. Another study documented a sevenfold increase in the risk of high school incompletion among lead-exposed children. One study indicates that enhanced lead screening of young children and lead abatement programs would significantly reduce the estimated 20 percent of juvenile delinquency that is associated with lead poisoning, resulting in significant savings from avoidance of later imprisonment.[21]

- The Centers for Disease Control indicates that the benefit-cost ratio of the measles, mumps, and rubella vaccine is more than 14:1 and is 10:1 for polio immunization. Estimated savings per year are about $500 million and $1 billion, respectively.[22]

Conclusion

Investment in the youngest, most at-risk individuals will provide the largest returns. Many of the studies on prenatal care and child development preschool programs reflect that those who benefited the most were individuals who were considered most at risk—the poor, uninsured, and economically disadvantaged. The success of many prevention programs relies on their intensiveness and quality. When these attributes are traded in exchange for serving more individuals, the beneficial impacts may be lost for all participants.

Early investment in services for children and families has beneficial short- and long-term results—not only for the individual, but also for society. Ensuring that children are born with minimal risk of health and learning disabilities, that programs are accessible to encourage parent-child interaction, and that quality, developmentally appropriate preschool programs are available for all children will yield multiple benefits.

Services provided to one individual often help other family members. Not only are the lives of those receiving help improved immediately through preventive initiatives, but these programs and services also diminish the chance of future crises, thus helping to break the intergenerational cycle of poverty. States have recognized that programs that do avert crises produce long-term economic savings and have implemented statewide reforms to enhance comprehensive preventive services for children and their families.

Endnotes

1. National Center for Educational Statistics, 1983.

2. U.S. Department of Justice, 1992.

3. National Center for Children in Poverty, 1990.

4. Children's Defense Fund, 1987.

5. National Center for Children in Poverty, 1990.

6. U.S. Congress, House of Representatives, Select Committee on Children, Youth, and Families, *Opportunities for Success: Cost-Effective Programs for Children Update, 1990* (Washington, D.C.: U.S. Congress, 2nd session, October 1990), p. 8.

7. Committee for Economic Development, *The Unfinished Agenda: A New Vision for Child Development and Education* (New York, N.Y.: Committee for Economic Development, 1991), p. 11.

8. National Commission on Children, *Beyond Rhetoric: A New American Agenda for Children and Families* (Washington, D.C.: U.S. Government Printing Office, 1991), p. 17.

9. Dominic Fullo, *The Effects of Gender, At-Risk Status, and Number of Years in Pre-School on Children's Academic Readiness* (Milwaukee, Wis.: University of Wisconsin-Milwaukee, 1990).

10. The Perry Preschool study has become the standard point of reference in the argument for early education. It includes the most complete cost-benefit economic analysis of the effects of preschool to date. Other studies have supported its findings. The Perry study began in 1962 with 123 black, disadvantaged children from a single school district divided randomly into two groups. One of the groups attended two years of high-quality preschool, while the control group went directly into kindergarten without the two years of early education.

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13. National Health and Education Consortium, *Crossing the Boundaries Between Health and Education* (Washington, D.C.: National Health and Education Consortium, 1990).

14. Lisbeth B. Schorr, Deborah Both, and Carol Copple, editors, *Effective Services for Young Children* (Washington, D.C.: National Academy Press, 1991).

15. Children's Defense Fund, p. 55.

16. Select Committee on Children, Youth, and Families, p. 27.

17. Select Committee on Children, Youth, and Families, p. 35.

18. Select Committee on Children, Youth, and Families, p. 35.

19. U.S. General Accounting Office, *Early Intervention: Federal Investments Like WIC Can Produce Savings* (Washington, D.C.: General Accounting Office, 1992).

20. Ian T. Hill and Janine M. Breyel, *Caring for Kids* (Washington, D.C.: National Governors' Association, 1991).

21. Herbert L. Needleman, "Lead Exposure: The Commonest Environmental Disease of Childhood," *Zero to Three*, vol. XI, no. 5 (June 1991).

22. Select Committee on Children, Youth, and Families, p. 57.

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This publication is a product of a year-long effort by eleven states to identify, examine, and initiate strategies for achieving goal one of the national education goals. By the year 2000, all children in America will start school ready to learn. *Every Child Ready for School* focuses on the three objectives under goal one. It examines the linkages between early childhood development services, parental involvement, and health and provides benchmarks for helping states measure their progress toward achieving each of the objectives and, subsequently, the school readiness goal.

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